

Application No.: 10/820,389

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Docket No.: 542262000200

REMARKS

Claims 1-27 stand rejected in the present Office Action. In this response, claims 1, 11, 21, and 24 are amended. Accordingly, claims 1-27 are pending in the present application. Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and reasons.

35 U.S.C. § 102 Rejection

In Sections 1-2 of the Office Action, claims 1-4, 9-14, and 18-27 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,912,662 (Butler et al.). In particular, the Examiner stated that:

Butler et al. disclose an inclination measurement device (20) and method of using comprising a conductive chamber (40) containing a dielectric fluid (50) (Figure 3) (col. 4 lines 54-55), at least three conductive plate electrodes (52-57) set approximately equidistantly from each other, partially immersed in said fluid (Figure 6B); a processing module (90) configured to measure capacitance between each of the electrodes and the conductive chamber and to determine an overall angle of inclination and the direction of inclination of the chamber values in a first and second axis (Figure 11); a display (25) for displaying a numerical value corresponding to the overall angle of inclination and further comprising left or right indicators positioned radially around the center of said device (Figures 2B & 2C), for the indication of the direction of inclination; and oscillators (82) and a microcontroller (92) & switch (88) to count the output cycles and selective couple said oscillator with said electrodes (Figure 11).

Butler et al. discloses an inclinometer including a sensor unit 40. "The sensor unit 40 consists of two plates 42, 44 which, in a preferred embodiment, are mirror images of each other." A peripheral edge 46 holds the plates 42, 44 in a fixed spacing and parallel relationship to each other. The plates 42, 44 and peripheral edge 46 define an internal cavity 48. The internal cavity 48 is partially filled with a fluid 50. See col. 4, lines 3-13; Figures 3-7B.

Plate 42 is divided into "three conductive but electrically isolated sectors, or triads, such as wedge shaped sectors 52, 54, and 56." These wedge shaped sectors define an "outer circle and

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are clustered about a central isolated and conducting hub 58." Plate 44 is similarly configured with its wedge shaped sectors 53, 55, and 57. See col. 4, lines 13-31; Figures 3-7B.

The wedge shaped sectors 52, 54, 56 and wedge shaped sectors 53, 55, 57 are co-planar and flush with its respective plate 42 or 44. See Figure 3. One surface of each of the wedge shaped sectors 52-57 (the surfaces shown in Figures 4A and 4C) forms a part of the internal cavity 48. Hence, the fluid 50 may be in contact with *at most* one surface or side of each of the wedge shaped sectors 52-57.

In contrast, amended independent claim 1 recites, among other things, that at least three electrodes are partially immersed in the fluid, each of the at least three electrodes including more than one side, and more than one side of each of the at least three electrodes being partially immersed in the fluid. Amended independent claim 11 recites, among other things, that the inclination sensor includes at least one electrode having more than one side partially immersed in a fluid. Amended independent claim 21 recites, among other things, partially immersing more than one side of at least one electrode in a fluid. Amended independent claim 24 recites, among other things, that at least three electrodes are partially immersed in a fluid, each of the at least three electrodes include more than one side, and that more than one side of each of the at least three electrodes are partially immersed in the fluid.

Support is found, for example, at Applicant's Figures 4A-4B. For the portion of a given electrode immersed in the fluid, all sides of this portion is covered and is in contact with the fluid. Each of Applicant's independent claims 1, 11, 21, and 24 is amended to more distinctly recite the partially immersion feature. Applicant's electrodes do not form an internal cavity or are otherwise configured such that only one surface or side of each of the electrodes can be in contact with the fluid. Even if any of Butler et al.'s wedge shaped sectors is in maximum amount of contact with the fluid, this would still only be a single surface (i.e., the surface forming part of the internal cavity 48) of the wedge shaped sector being in contact with the fluid. Thus, to the extent that Butler et al. can be considered to disclose partial immersion of at least one electrode in a fluid, Butler et al. fails to

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disclose more than one side of a given electrode being partially immersed in the fluid, as recited in each of claims 1, 11, 21, and 24.

Accordingly, it is respectfully submitted that each of independent claims 1, 11, 21, and 24 is allowable over Butler et al. Each of claims 2-4, 9-10, 12-14, 18-20, 22-23, and 25-27, which depend from one of claims 1, 11, 21, or 24, is also allowable over Butler et al. for at least the same reason as for claims 1, 11, 21, and 24.

35 U.S.C. § 103 Rejection

In Sections 3-4 of the Office Action, claims 5, 7, 8, and 15-17 are rejected over 35 U.S.C. § 103(a) as being unpatentable over Butler et al. in view of U.S. Patent No. 4,866,850 (Kelly et al.).

Applicant respectfully submits that Kelly et al. also fails to disclose, among other things, more than one side of at least one electrode being partially immersed in a fluid. Accordingly, it is respectfully submitted that claims 5, 7, 8, and 15-17, which depend from one of amended independent claims 1 or 11, are allowable over Butler et al. and Kelly et al., alone or in combination, for at least the same reason as for claims 1 and 11 discussed above.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket

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no. 542262000200. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By Katherine Lee

Katherine D. Lee

Registration No.: 44,865

MORRISON & FOERSTER LLP

425 Market Street

San Francisco, California 94105-2482

(415) 268-6983

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